

CLAIMS

1. (Previously Presented) A powertrain of a vehicle having wheels, the powertrain comprising

- a thermal engine having an output shaft, which when required can be mechanically connected to at least one of the wheels for driving the at least one of the wheels,

- an energy storage device,

- an electric motor, which is mechanically connected to the thermal engine or to the at least one wheel and which is electrically connected to the energy storage device and is supplied with electric power from the energy storage device for supplying or receiving mechanical power or torque when required,

wherein at least part of filtered air from an air filter for supplying filtered air to the thermal engine is redirected to pass in such a way that at least some internal parts of the electric motor will obtain cooling from the filtered air.

2. (Original) A powertrain according to claim 1, wherein at least part of the filter air is made to pass through an airgap of the electric motor.

3. (Original) A powertrain according to any of claims 1-2, wherein at least part of the air is made to pass along permanent magnets of the electric motor.

4. (Original) A powertrain according to claims 1-2, wherein at least part of the air is made to pass between windings of the electric motor.

5. (Cancelled)

6. (Previously Presented) A powertrain of a vehicle having wheels, the powertrain including a thermal engine and an electric motor for selectively driving at least one of the wheels, the electric motor comprising:

- an inlet for receiving filtered air from an air filter for supplying filtered air to the thermal engine; and
- channels for receiving said filtered air and directing the filtered air to pass in such a way that at least some internal parts of the electric motor will obtain cooling from said filtered air.

7. (Previously Presented) The powertrain of claim 6, wherein said channels include an airgap between a stator and a rotor of the electric motor.

8. (Previously Presented) The powertrain of claim 6, wherein said channels include channels passing along permanent magnets of the electric motor.

9. (Previously Presented) The powertrain of claim 6, wherein said channels include channels passing between windings of the electric motor.

10. (Previously Presented) The powertrain of claim 6 further comprising an energy storage device, the thermal engine having an output shaft, which when required can be mechanically connected to said at least one of the wheels for driving the wheel, the electric motor mechanically connected to the output shaft of the thermal engine or to said at least one of the wheels and electrically connected to the energy storage device for being supplied with electric power from the energy storage device for supplying mechanical power or torque when

required or for receiving mechanical power or torque for supplying electric power to the energy storage device.

11. (Previously Presented) In a vehicle having wheels and a powertrain including a thermal engine and a electric motor for selectively driving at least one wheel of the vehicle, a method of cooling the electric motor comprising:

- passing a flow of air to the thermal engine through an air filter to produce filtered air; and
- providing at least part of the filtered air from the air filter to the inside of the electric motor to provide cooling thereof.

12. (Previously Presented) The method of claim 11, wherein at least part of the filtered air is made to flow through an airgap between a stator and rotor of the electric motor.

13. (Previously Presented) The method of claim 11, wherein at least part of the filtered air is made to flow along permanent magnets of the electric motor.

14. (Previously Presented) The method of claim 11, wherein at least part of the filtered air is made to flow between windings of the electric motor.

15. (New) The powertrain of claim 1, wherein the thermal engine has one or more forced filtered air flows and at least part of said filtered for said internal parts of said electric motor is obtained from said one or more forced filtered air flows.